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 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2           "Ask CAS" for self-help around the clock
 NEWS  3  JAN 27   Source of Registration (SR) information in REGISTRY updated
                   and searchable
 NEWS  4  JAN 27   A new search aid, the Company Name Thesaurus, available in
                   CA/CAplus
 NEWS  5  FEB 05   German (DE) application and patent publication number format
                   changes
 NEWS  6  MAR 03   MEDLINE and LMEDLINE reloaded
 NEWS  7  MAR 03   MEDLINE file segment of TOXCENTER reloaded
 NEWS  8  MAR 03   FRANCEPAT now available on STN
 NEWS  9  MAR 29   Pharmaceutical Substances (PS) now available on STN
 NEWS 10  MAR 29   WPIFV now available on STN
 NEWS 11  MAR 29   New monthly current-awareness alert (SDI) frequency in RAPRA
 NEWS 12  APR 26   PROMT: New display field available
 NEWS 13  APR 26   IFIPAT/IFIUDB/IFICDB: New super search and display field
                   available
 NEWS 14  APR 26   LITALERT now available on STN
 NEWS 15  APR 27   NLDB: New search and display fields available
 NEWS 16  May 10   PROUSDDR now available on STN
 NEWS 17  May 19   PROUSDDR: One FREE connect hour, per account, in both May
                   and June 2004
 NEWS 18  May 12   EXTEND option available in structure searching
 NEWS 19  May 12   Polymer links for the POLYLINK command completed in REGISTRY
 NEWS 20  May 17   FRFULL now available on STN

 NEWS EXPRESS  MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004
 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
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 NEWS LOGIN    Welcome Banner and News Items
 NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
 NEWS WWW      CAS World Wide Web Site (general information)

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COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

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STRUCTURE FILE UPDATES:   17 MAY 2004  HIGHEST RN 682740-60-9
DICTIONARY FILE UPDATES:  17 MAY 2004  HIGHEST RN 682740-60-9

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http://www.cas.org/ONLINE/DBSS/registryss.html

=> file caplus
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.42       0.63

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FILE COVERS 1907 - 18 May 2004  VOL 140 ISS 21
FILE LAST UPDATED: 17 May 2004  (20040517/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> shaped
        125152 SHAPED
             1 SHAPEDS
L1      125153 SHAPED
                 (SHAPED OR SHAPEDS)

=> raney
         27598 RANEY
             1 RANEYS
L2       27598 RANEY
```

```
                (RANEY OR RANEYS)

=> l1(l)l2
L3          58 L1(L)L2

=> pore volume
        118995 PORE
         67206 PORES
        160892 PORE
                (PORE OR PORES)
         88801 VOLUME
         13824 VOLUMES
         96842 VOLUME
                (VOLUME OR VOLUMES)
        641588 VOL
         80758 VOLS
        690718 VOL
                (VOL OR VOLS)
        737445 VOLUME
                (VOLUME OR VOL)
L4       14398 PORE VOLUME
                (PORE(W)VOLUME)

=> l3 and l4
L5           3 L3 AND L4

=> d l5 1-3 ti

L5   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Textural characterisation of iron-promoted Raney nickel catalysts
     synthesized by mechanical alloying

L5   ANSWER 2 OF 3  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Manufacture of shaped, fixed-bed, Raney-type metal
     catalyst for (de)hydrogenation and hydrogenolysis

L5   ANSWER 3 OF 3  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Computer calculation of the porous structure of adsorbents


=> d l5 1-3 ti fbib abs

L5   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Textural characterisation of iron-promoted Raney nickel catalysts
     synthesized by mechanical alloying
AN   2002:375767  CAPLUS
DN   136:360134
TI   Textural characterisation of iron-promoted Raney nickel catalysts
     synthesized by mechanical alloying
AU   Salmones, J.; Zeifert, B.; Cabanas-Moreno, J. G.; Aguilar-Rios, G.; Rojas,
     F.; Ramirez-Cuesta, A. J.
CS   Instituto Mexicano del Petroleo, Mexico, D.F. 07730, Mex.
SO   Adsorption Science & Technology (2001), 19(10), 871-885
     CODEN: ASTEEZ; ISSN: 0263-6174
PB   Multi-Science Publishing Co. Ltd.
DT   Journal
LA   English
AB   Mesoporous binary AlxNiy and ternary AlxNiyFez Raney-type
     catalysts were synthesized by a two-step procedure involving two main
     processes, i.e. (i) mech. metal alloying and (ii) alkaline aluminum leaching.
     Pure metallic powders of Al, Ni and Fe (if required) were first mech.
     alloyed in an attrition mill and then subjected to KOH leaching to
     selectively remove part of the aluminum atoms.  After a slow drying
     process, a fine, nanostructured slit-shaped material was
     obtained.  Substrate characterization involved studies by atomic absorption
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(AA), X-ray diffraction (XRD), SEM, energy-dispersive X-ray spectroscopy (EDXS) in the SEM and nitrogen physisorption. An intermetallic β- or B2-(AlNi) phase with a metastable bcc crystalline structure was formed as a non-equilibrium phase after the metal alloying process. Because of aluminum removal, the β-(AlNi) phase was transformed into the more stable nickel fcc structure. In this work, some important physicochem. properties of binary (Al-Ni) and ternary (Al-Ni-Fe) catalysts, with especial attention to textural properties adduced from nitrogen physisorption, are presented and discussed.

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
TI Manufacture of **shaped**, fixed-bed, **Raney**-type metal catalyst for (de)hydrogenation and hydrogenolysis
AN 1998:776617 CAPLUS
DN 130:40073
TI Manufacture of **shaped**, fixed-bed, **Raney**-type metal catalyst for (de)hydrogenation and hydrogenolysis
IN Sauer, Jorg; Haas, Thomas; Keller, Bruno; Freund, Andreas; Burkhardt, Werner; Michelchen, Dietrich; Berweiler, Monika
PA Degussa Aktiengesellschaft, Germany
SO Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 880996	A1	19981202	EP 1998-108422	19980508
	EP 880996	B1	20030625		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
				DE 1997-19721897A	19970526
	DE 19721897	A1	19981203	DE 1997-19721897	19970526
	TW 457128	B	20011001	TW 1998-87107849	19980520
				DE 1997-19721897A	19970526
	JP 10328569	A2	19981215	JP 1998-141287	19980522
				DE 1997-19721897A	19970526
	SG 74630	A1	20010724	SG 1998-1127	19980523
				DE 1997-19721897A	19970526

PATENT FAMILY INFORMATION:
FAN 2004:310810

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004072686	A1	20040415	US 2001-988390	20011119
				DE 1997-19721897A	19970526
				US 1998-81568 A2	19980519
	DE 19721897	A1	19981203	DE 1997-19721897	19970526
	US 6337300	B1	20020108	US 1998-81568	19980519
				DE 1997-19721897A	19970526

AB The title catalyst having a total **pore volume** 0.1-0.6 mL/g consists entirely of a catalyst metal alloy, an extractable metal alloy component and, optionally, a promoter. The catalyst comprises an activated, 0.1-2.0-mm-thick shell obtained by leaching the extractable alloy component. Thus, a catalyst having bulk d. 1.2 kg/L was prepared by extruding a mixture comprising an Co/Al alloy and Ultraform N 2320 binder, decomposing the binder at 120-280°, calcining the residue at 800°, and extracting the Al for 120 min at 80° with 20% aqueous NaOH. The catalyst was used to produce 99.9% pure isophoronediamine from isophoronenitrile in a 2-step process with 89.7% yield.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

TI Computer calculation of the porous structure of adsorbents
AN 1978:158884 CAPLUS
DN 88:158884
TI Computer calculation of the porous structure of adsorbents
AU Fasman, A. B.; Usenov, B. Zh.; Biadilov, N.; Bidaibekov, E.
CS Kaz. Gos. Univ. im. Kirova, Alma-Ata, USSR
SO Ref. Dokl. Soobshch. - Mendeleevsk. S'ezd Obshch. Prikl. Khim., 11th (1975), Volume 3, 101. Editor(s): Rozinskaya, V. N. Publisher: "Nauka", Moscow, USSR.
 CODEN: 37MOAO
DT Conference
LA Russian
AB The adsorption isotherms of Ar and N on activated C, silica gel, and **Raney** Ni catalysts were studied at 77.4 K. A computer program in ALGOL language is presented for adsorbent sp. surface calcns. from the adsorption phenomena, BET measurements, and by applying the method of effective radii for **pore volume** distribution. The calcns. for N and Ar adsorption were compared. The dependence of the width of the polymol. layer of Ar on pressure was determined on powdered and wire-**shaped** metallic materials.

```
=> pore
        118995 PORE
         67206 PORES
L6      160892 PORE
                 (PORE OR PORES)

=> d his

     (FILE 'HOME' ENTERED AT 08:34:56 ON 18 MAY 2004)

     FILE 'REGISTRY' ENTERED AT 08:35:11 ON 18 MAY 2004

     FILE 'CAPLUS' ENTERED AT 08:35:18 ON 18 MAY 2004
L1      125153 SHAPED
L2       27598 RANEY
L3          58 L1(L)L2
L4       14398 PORE VOLUME
L5           3 L3 AND L4
L6      160892 PORE

=> l3 and l6
L7           9 L3 AND L6

=> l7 not l5
L8           6 L7 NOT L5

=> d l8 1-6 ti

L8  ANSWER 1 OF 6  CAPLUS  COPYRIGHT 2004 ACS on STN
TI  Hydrogenation of nitriles into primary amines over Raney catalysts

L8  ANSWER 2 OF 6  CAPLUS  COPYRIGHT 2004 ACS on STN
TI  Effect of chemical composition on the porous structure of Raney nickel and
    platinum catalysts

L8  ANSWER 3 OF 6  CAPLUS  COPYRIGHT 2004 ACS on STN
TI  Mercury/mercury oxide electrode for electrolytic cells

L8  ANSWER 4 OF 6  CAPLUS  COPYRIGHT 2004 ACS on STN
TI  Storage of hydrogenation catalysts for chemical and electrochemical
    purposes
```

L8 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
TI Catalyst, particularly gas diffusion electrode, and method of making it

L8 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
TI Catalyst electrode

=> d l8 1-6 ti fbib abs

L8 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
TI Hydrogenation of nitriles into primary amines over Raney catalysts
AN 2002:369028 CAPLUS
DN 136:387717
TI Hydrogenation of nitriles into primary amines over Raney catalysts
IN Ansmann, Andreas; Benisch, Christoph; Funke, Frank; Ohlbach, Frank; Merger, Martin
PA BASF Aktiendesellschaft, Germany
SO U.S. Pat. Appl. Publ., 6 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002058841	A1	20020516	US 2001-985982	20011107
US 6677486	B2	20040113		
			DE 2000-10056839A	20001116
DE 10056839	A1	20020523	DE 2000-10056839	20001116
EP 1207149	A1	20020522	EP 2001-125324	20011026
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
			DE 2000-10056839A	20001116
JP 2002205975	A2	20020723	JP 2001-347779	20011113
			DE 2000-10056839A	20001116

AB Nitriles are hydrogenated to primary amines over an activated, alpha-Al2O3-containing, macroporous **Raney** catalyst based on an alloy of aluminum and at least one transition metal selected from the group consisting of iron, cobalt and nickel, and, if desired, one or more further transition metals selected from the group consisting of titanium, zirconium, chromium and manganese, which is obtainable by a process comprising: (a) preparing a kneadable composition comprising the alloy, a shaping aid, water and a **pore** former; (b) shaping the kneadable composition to form a **shaped** body; (c) calcining the **shaped** body; (d) activating the calcined **shaped** body by treatment with an aqueous alkali solution; (e) rinsing the **shaped** catalyst body with aqueous alkali metal hydroxide solution; and (f) rinsing the **shaped** catalyst body with water.

L8 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
TI Effect of chemical composition on the porous structure of Raney nickel and platinum catalysts
AN 1976:549499 CAPLUS
DN 85:149499
TI Effect of chemical composition on the porous structure of Raney nickel and platinum catalysts
AU Pushkareva, G. A.; Timofeeva, V. F.; Bazhakov, D. K.; Fasman, A. B.
CS Kaz. Gos. Univ. im. Kirova, Alma-Ata, USSR
SO Mater. Resp. Nauchno-Tekh. Konf. Molodykh Uch. Pererab. Nefti Neftekhim., 2nd (1974), 217-19. Editor(s): Sultanov, A. S. Publisher: Sredneaziat. Nauchno-Issled. Inst. Neftepererab. Prom-sti., Tashkent, USSR.
CODEN: 33GBAT
DT Conference
LA Russian
AB The porous structure of **Raney** Ni or **Raney** Pt

catalysts, prepared by leaching of Al from alloys of Group VIII elements, was studied by capillary condensation, Hg porosimetry, x-ray diffraction, and Ar sorption hysteresis. The form of **pores** depended on the Pt-group metal concentration in the catalysts and on the phase composition of the leached-out alloys. The catalysts prepared from alloys NiAl3-M (M = Cu, Pt, Ag) and Ni50-x-Mx-50% Al (M = Ag, Mo, V, Ta, Rh) have cylindric and those prepared from Pt Al3-M (M = Pd, Rh, Ru, Ir) bottle-**shaped** **pores.**

L8 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
TI Mercury/mercury oxide electrode for electrolytic cells
AN 1972:534346 CAPLUS
DN 77:134346
TI Mercury/mercury oxide electrode for electrolytic cells
IN Jung, Margarete
PA Varta G. m.b.H.
SO Ger. Offen., 14 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2108021	A	19720831	DE 1971-2108021	19710219
	IT 947580	A	19730530	IT 1972-20587	19720215
				DE 1971-2108021	19710219
	GB 1374145	A	19741113	GB 1972-7455	19720217
				DE 1971-2108021	19710219
	FR 2125624	A1	19720929	FR 1972-5789	19720221
	FR 2125624	A5	19720929		
				DE 1971-2108021	19710219

AB In a process for the manufacture of Hg/HgO electrodes for galvanic cells containing alkaline electrolytes and with a matrix of a metal capable of sorbing H, the matrix metal is charged with H and then contacted with Hg. Thus, the matrix metal may be charged with H by extracting at least portions of the inactive component of a **Raney** alloy, or by aid of the aqueous solution of a complex hydride, such as hydrazine or alkali boranate. During amalgamation the matrix is preferably cathodically polarized. Thus, Ni, Fe, or Co, individually, as mixts., or as alloys are charged with H and then contacted with Hg. During charging with H and contacting with Hg the matrix metal is protected against contact with oxidizing substances, e.g. by an alkali metal hydroxide protective layer. The matrix metal is contacted with Hg until no more H evolves from the metals. The matrix is preferably made by pressing and sintering of powdered **Raney** alloys of Ni, Fe, and Co. The powdered matrix metal is **shaped** into an electrode body after addition of an oxidation-resistant organic binder and optionally also of a **pore**-forming agent.

L8 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
TI Storage of hydrogenation catalysts for chemical and electrochemical purposes
AN 1967:468021 CAPLUS
DN 67:68021
TI Storage of hydrogenation catalysts for chemical and electrochemical purposes
PA Varta Pertrix-Union G.m.b.H.
SO Neth. Appl., 25 pp.
CODEN: NAXXAN
DT Patent
LA Dutch
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI NL 6614162 19670410
DD 19651009
DD 19660325
DE 1542552 DE
DE 1542556 DE
DE 1546730 DE
FR 1509966 FR
GB 1160872 GB
US 3573038 19710000 US

AB Hydrogenation catalysts are unstable towards atmospheric O and are deactivated during storage. Such powder catalysts used to prepare H electrodes and containing promoters as Cu, Hg, Ag, or Cd are dehydrogenated, treated with soluble I or Br compds. or O-containing Cl compds. The deactivated catalyst is mixed with electrolyte-unsol. metals or C powder to be **shaped** to electrodes by pressure and heat treatment. The deactivated powder is mixed with metalloidic or metallic O-acceptors giving H during their dissoln. (Mg, Ca, Zn, B, Al, or Si), with volatile compds. [as (NH4)2CO3 or citric acid] when the sintering is performed under pressure; alkali carbonated and chlorides when sintering is performed under heat and pressure. The powder or formed catalyst is charged with H at 60-90° under cathodic charge in a solution in which a metal is dissolved with H release. The H loading is interrupted one or more times by anodic charge. Thus, 500 g. **Raney** alloy containing 50% weight Ni and 50% weight Al (particle size 10-15 μ) was treated with aqueous KOH 6N containing 10 g./l. K Na tartrate with cooling. After the 1st H release, 125 ml. of a 10 g./l. CuCl2.2H2O solution was added under stirring to precipitate finely divided Cu. The suspension was boiled to complete the H release; the **Raney** Ni was then washed twice with fresh KOH and 5 times with 2 l. distilled water. A KIO3 solution was added to remove H completely from the catalyst. The solution was filtered after 24 hrs. and the solid washed with water, with acetone and dried at 50° in vacuo. **Raney** Ni 1 weight part was mixed with 1 weight part Ni carbonyl and 0.2 weight part B and pressed at 450° under 0.5 ton/cm.2 The resulting electrode was treated 30 min. in KOH to dissolve B with O-removal and nascent H formation which fills the catalyst **pores.**

L8 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
TI Catalyst, particularly gas diffusion electrode, and method of making it
AN 1967:428779 CAPLUS
DN 67:28779
TI Catalyst, particularly gas diffusion electrode, and method of making it
IN Siemens A.-G.; Varta A.-G.
SO Fr., 3 pp.
CODEN: FRXXAK
DT Patent
LA French
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI FR 1451664		19660902		
			DE	19641020
DE 1280822			DE	
GB 1110852			GB	
US 3481789		19690000	US	

AB Two layers having **pores** of different size make it possible to increase the catalytic activity. The finest **pores** are in contact with the electrolyte and the largest ones, with the gas. A support coat with fine **pores**, conductor of elec., contains larger **pores**, the surface of which is covered by a substance having catalytic or electrochem. activity. The materials forming the support coat (coal and (or) Ni agglomerated powder plus catalyst) is compressed and sintered over a packing material with large grains. These two operations can be simultaneous or successive. For the first case, the

packing material must be vaporizable or decomposable during the sintering operation; for the 2nd case, the packing material must be resistant to heat, and is removed after sintering (dissoln. in H2O). A solution containing

1

part of Zapon lacquer in 5 parts by weight of acetone is poured onto KCl (grain size 300-100 μ), heated while stirring, and then milled with a **Raney** Ni powder (Al/Ni = 1/1 by weight, grain size 6 μ). After sifting the excess powder, the packing material is mixed with a carbonyl Ni powder (1/3 by weight); then, 20 g. of the mixture is molded into an electrode-**shaped** mold of 40 mm. diameter at 400° under 30 tons. The KCl and the inactive elements of the Ni **Raney** are dissolved in a 5N KOH solution A 2nd electrode was molded by treating 10 g. of the above mixture covered with 3 g. of carbonyl Ni under 30 tons, at 400°. The electrodes obtained exhibit extraordinary mech. solidity.

L8 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
TI Catalyst electrode
AN 1965:469167 CAPLUS
DN 63:69167
OREF 63:12683h,12684a-e
TI Catalyst electrode
IN Justi, Eduard; Friese, Karl H.; Winsel, August
PA Varta Pertrix-Union G.m.b.H.; Siemens-Schuckertwerke A.-G.
SO 11 pp.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3201282		19650817	US	
				DE	19580719

AB In fuel cells, for the electrochem. generation of energy from reducible or oxidizable substances which generally react at the catalytically active parts of the electrode with evolution of gas, even in the current-less state, such undesirable reactions are automatically interrupted by providing porous electrodes composed of layers with different properties, i.e. a catalytically active working layer, covered by an inactive surface layer. The **pore** radii are in the range 0.5-50 μ and the radii of the active layer are at least 1.5 times those of the inactive layer. For substances which react with the evolution of H, the working layer is made from a material which acts as a reversible H electrode, and the surface layer from a material with a H min. overvoltage which is higher than the potential of the reversible H electrode under a H pressure equal to the capillary pressure of the electrolyte within the **pores** of the surface layer. In this way, the cathodic evolution of H is prevented at the surface layer of the noncharged electrode in contact with the electrolyte. Analogous choices for electrode materials are made, in case of substances reacting with the evolution of O. The active working layer is a double-skeleton catalyst electrode (CA 54, 19229i), i.e. a catalytically active **Raney** metal embedded in 80-20% by weight of an elec. conductive skeleton support. The surface layer also may have this structure, but in this case, the **Raney** metal chosen must be catalytically inactive with respect to the reaction proceeding on the electrode. Plastics, such as high mol. weight polyethylene also may be employed for the surface layer. Thus, a mold was charged successively with the following powder mixts.: (a) 1 g. of a mixture of 1.2 parts by weight of Cu powder, 3-10 μ, and 1 part by weight of a pulverulent **Raney** Cu alloy, 30-50 μ, containing equal wts. of Cu and Al; (b) 10 g. of a mixture of 1.5 parts by weight of Ni(CO)4 powder, 1-5 μ, and 1 part by weight of **Raney** Ni alloy, 75-100 μ, containing equal wts. of Ni and Al; and (c) 1 g. of the mixture described in (a). The powders were pressed at 450° and a pressure of 5000 kg./cm.2 The Al was removed with 6N KOH to form the double-skeleton catalyst electrode structure. In doing so, the potential of the electrode was kept by 300 mv. more pos.

than the potential of the reversible H electrode under atmospheric pressure in the activating solution by applying an anodic current. The electrode was next provided with a current tap of lye-resistant steel and immersed in a solution containing 360 ml. H2O, 120 ml. EtOH, and 216 g. KOH. At 66°, a constant anodic c.d. ≤30 ma./cm.2 could be drawn. Its equilibrium rest potential was 1.14 v. vs. S.C.E. The effect of the inactive surface layer was particularly impressive at the border of the plate-**shaped** electrode where the working layer was not covered by the surface layer. Here, H bubbles were constantly evolved. This detrimental marginal conversion was eliminated by clamping the electrode so as to seal off the exposed areas of the working layer. This prevented the marginal H evolution, but did not decrease the c.d. which could be drawn from the electrode, based on the free surface area.

=>
=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	54.66	55.29

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-6.24	-6.24

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 08:53:59 ON 18 MAY 2004

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:
* * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 09:05:28 ON 18 MAY 2004
FILE 'CAPLUS' ENTERED AT 09:05:28 ON 18 MAY 2004
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	54.66	55.29

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-6.24	-6.24

=> d his

(FILE 'HOME' ENTERED AT 08:34:56 ON 18 MAY 2004)

FILE 'REGISTRY' ENTERED AT 08:35:11 ON 18 MAY 2004

FILE 'CAPLUS' ENTERED AT 08:35:18 ON 18 MAY 2004

L1	125153	SHAPED
L2	27598	RANEY
L3	58	L1(L)L2
L4	14398	PORE VOLUME
L5	3	L3 AND L4
L6	160892	PORE
L7	9	L3 AND L6

```
L8             6 L7 NOT L5

=> isophorone diamine
          8257 ISOPHORONE
            38 ISOPHORONES
          8266 ISOPHORONE
                 (ISOPHORONE OR ISOPHORONES)
         39726 DIAMINE
         24859 DIAMINES
         55216 DIAMINE
                 (DIAMINE OR DIAMINES)
L9         563 ISOPHORONE DIAMINE
                 (ISOPHORONE(W)DIAMINE)

=> l3 and l9
L10            0 L3 AND L9

=> l2 and l9
L11            1 L2 AND L9

=> d l11 ti fbib abs

L11  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Preparation of isophorone diamine by heteropoly acid
     catalyzed imination of isophorone nitrile followed by reduction
AN   1996:169251  CAPLUS
DN   124:316585
TI   Preparation of isophorone diamine by heteropoly acid
     catalyzed imination of isophorone nitrile followed by reduction
IN   Herkes, Frank E.; Kourtakis, Kostantinos
PA   E. I. Du Pont de Nemours & Co., USA
SO   U.S., 5 pp. Cont.-in-part of U.S. Ser. No. 94,361, abandoned.
     CODEN: USXXAM
DT   Patent
LA   English
FAN.CNT 2
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
PI   US 5491264         A    19960213      US 1994-304072   19940912
                                           US 1993-94361    19930727

PATENT FAMILY INFORMATION:
FAN  1995:422842
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
PI   DE 4426472         A1   19950202      DE 1994-4426472  19940726
                                           US 1993-94361    19930727

OS   CASREACT 124:316585
AB   A continuous process for the preparation of 3-cyano-3,5,5-
     trimethylcyclohexaneimine, the ketimine intermediate to isophorone
     diamine, comprises the treatment of 3-cyano-3,5,5-
     trimethylcyclohexanone (isophorone nitrile, IPN) with ammonia in a molar
     ratio of 6-100 mol of ammonia per mol of IPN, at a temperature in the range of
     50° to 90° and at a pressure in the range of 500 to 3500
     psig, in the presence of 0.2-3 g of a heteropoly acid catalyst supported
     on a refractory oxide or carbon per g of IPN plus ammonia, wherein the
     catalyst remains on the support throughout the process.  The ketimine is
     then reduced to isophorone diamine with hydrogen and
     ammonia in presence of a hydrogenation catalyst.  Thus, e.g., into a
     vertical stainless steel fixed bed continuous flow reactor was charged
     12-molybdophosphoric acid supported on titania pellets; a second vertical
     tubular hydrogenation reactor in series was charged with Raney
     cobalt catalyst and glass beads; liquid ammonia (330 g/h) and isophorone
     nitrile (99%, 136 g/h) were pumped continuously downflow through the first
     reactor at 60° and 238 bar pressure (the hold-up-time in the
     imination step was 9 min.); the ketimine product in ammonia exiting the
```

first reactor was then fed into the top of the hydrogenation reactor at 110° and 238 bar along with 74 L/h hydrogen; GC anal. indicated 92.2 wt % **isophorone diamine** vs. 73.5 wt % (16 min imination residence time) in the absence of imination catalyst.

```
=> file reg
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                          ENTRY    SESSION
FULL ESTIMATED COST                                        69.33      69.96

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)              SINCE FILE      TOTAL
                                                          ENTRY    SESSION
CA SUBSCRIBER PRICE                                        -6.93      -6.93

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STRUCTURE FILE UPDATES:   17 MAY 2004  HIGHEST RN 682740-60-9
DICTIONARY FILE UPDATES:  17 MAY 2004  HIGHEST RN 682740-60-9

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

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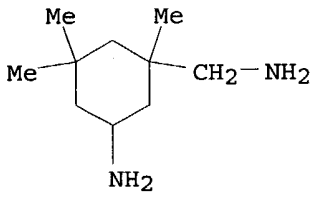
Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> e isophorone diamine/cn
E1            1     ISOPHORONE DIACETOACETAMIDE/CN
E2            1     ISOPHORONE DIACETOACETAMIDE-TRIPROPYLENE GLYCOL DIACRYLATE C
                    OPOLYMER/CN
E3            1 --> ISOPHORONE DIAMINE/CN
E4            1     ISOPHORONE DIAMINE-1,1'-METHYLENEBIS(4-ISOCYANATOCYCLOHEXANE
                    )-POLYETHYLENE GLYCOL BLOCK COPOLYMER/CN
E5            1     ISOPHORONE DIAMINE-2-ETHYLHEXYL GLYCIDYL ETHER COPOLYMER/CN
E6            1     ISOPHORONE DIAMINE-IPDI-KURAPOL P 2010 BLOCK COPOLYMER/CN
E7            1     ISOPHORONE DIAMINE-IPDI-POLYOXYPROPYLENE-PLACCEL CD 220PL CO
                    POLYMER/CN
E8            1     ISOPHORONE DIAMINE-ISOPHORONE DIISOCYANATE-2,2,4-TRIMETHYL-1
                    ,6-HEXANEDIOL-2,4,4-TRIMETHYL-1,6-HEXANEDIOL COPOLYMER/CN
E9            1     ISOPHORONE DIAMINE-ISOPHORONE DIISOCYANATE-JEFFAMINE ED 900
                    BLOCK COPOLYMER/CN
E10           1     ISOPHORONE DIAMINE-ISOPHORONE DIISOCYANATE-PHTHALIC ANHYDRID
                    E COPOLYMER/CN
E11           1     ISOPHORONE DIAMINE-ISOPHORONE DIISOCYANATE-POLY(TETRAMETHYLE
                    NE GLYCOL)-TETRAMETHYLXYLYLENE DIISOCYANATE COPOLYMER/CN
E12           1     ISOPHORONE DIAMINE-ISOPHORONE DIISOCYANATE-PROPOXYLATED BISP
                    HENOL A-TEREPHTHALIC ACID-TRIMELLITIC ANHYDRIDE COPOLYMER/CN

=> e3
L12           1 "ISOPHORONE DIAMINE"/CN

=> d l12
```

L12 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN 2855-13-2 REGISTRY
CN Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Cyclohexanemethylamine, 5-amino-1,3,3-trimethyl- (7CI, 8CI)
OTHER NAMES:
CN 1,3,3-Trimethyl-1-aminomethyl-5-aminocyclohexane
CN 1-Amino-3,3,5-trimethyl-5-aminomethylcyclohexane
CN 1-Amino-3-(aminomethyl)-3,5,5-trimethylcyclohexane
CN 3,3,5-Trimethyl-5-aminomethylcyclohexylamine
CN 3-Aminomethyl-3,5,5-trimethylcyclohexylamine
CN 5-Amino-1,3,3-trimethylcyclohexanemethanamine
CN 5-Amino-1,3,3-trimethylcyclohexanemethylamine
CN Araldite HY 5083
CN Chemammina CA 17
CN Epilox H 10-31
CN IPD
CN IPDA
CN **Isophorone diamine**
CN Luxam IPD
CN Polypox IPD
CN Rutadur SG
CN Vestamin IPD
FS 3D CONCORD
DR 177646-11-6, 129050-51-7, 25495-81-2, 50858-71-4, 52004-55-4, 45981-71-3, 52697-24-2, 116723-72-9
MF C10 H22 N2
CI COM
LC STN Files: AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, TOXCENTER, ULIDAT, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1222 REFERENCES IN FILE CA (1907 TO DATE)
611 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1222 REFERENCES IN FILE CAPLUS (1907 TO DATE)
8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplsu
'CAPLSU' IS NOT A VALID FILE NAME
SESSION CONTINUES IN FILE 'REGISTRY'
Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files that are available. If you have requested multiple files, you can specify a corrected file name or you can enter "IGNORE" to continue accessing the remaining file names entered.

=> file caplus
COST IN U.S. DOLLARS SINCE FILE TOTAL

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                                                      ENTRY     SESSION
FULL ESTIMATED COST                                    6.62       76.58

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)        SINCE FILE      TOTAL
                                                     ENTRY     SESSION
CA SUBSCRIBER PRICE                                    0.00       -6.93

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FILE COVERS 1907 - 18 May 2004  VOL 140 ISS 21
FILE LAST UPDATED: 17 May 2004  (20040517/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> l12
L13        1222 L12

=> d his

     (FILE 'HOME' ENTERED AT 08:34:56 ON 18 MAY 2004)

     FILE 'REGISTRY' ENTERED AT 08:35:11 ON 18 MAY 2004

     FILE 'CAPLUS' ENTERED AT 08:35:18 ON 18 MAY 2004
L1         125153 SHAPED
L2          27598 RANEY
L3             58 L1(L)L2
L4          14398 PORE VOLUME
L5              3 L3 AND L4
L6         160892 PORE
L7              9 L3 AND L6
L8              6 L7 NOT L5
L9            563 ISOPHORONE DIAMINE
L10             0 L3 AND L9
L11             1 L2 AND L9

     FILE 'REGISTRY' ENTERED AT 09:08:38 ON 18 MAY 2004
                E ISOPHORONE DIAMINE/CN
L12             1 E3

     FILE 'CAPLUS' ENTERED AT 09:09:16 ON 18 MAY 2004
L13          1222 L12

=> l12/prep
          1222 L12
       3148620 PREP/RL
L14        369 L12/PREP
                 (L12 (L) PREP/RL)
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=> l14 and l2
L15          16 L14 AND L2

=> l6 and l15
L16           3 L6 AND L15

=> d l16 1-3 ti fbib abs

L16  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Hydrogenation of nitriles into primary amines over Raney
     catalysts
AN   2002:369028  CAPLUS
DN   136:387717
TI   Hydrogenation of nitriles into primary amines over Raney
     catalysts
IN   Ansmann, Andreas; Benisch, Christoph; Funke, Frank; Ohlbach, Frank;
     Merger, Martin
PA   BASF Aktiendesellschaft, Germany
SO   U.S. Pat. Appl. Publ., 6 pp.
     CODEN: USXXCO
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
PI   US 2002058841     A1    20020516       US 2001-985982   20011107
     US 6677486        B2    20040113
                                           DE 2000-10056839A 20001116
     DE 10056839       A1    20020523       DE 2000-10056839 20001116
     EP 1207149        A1    20020522       EP 2001-125324   20011026
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
                                           DE 2000-10056839A 20001116
     JP 2002205975     A2    20020723       JP 2001-347779   20011113
                                           DE 2000-10056839A 20001116
AB   Nitriles are hydrogenated to primary amines over an activated,
     alpha-Al2O3-containing, macroporous Raney catalyst based on an alloy
     of aluminum and at least one transition metal selected from the group
     consisting of iron, cobalt and nickel, and, if desired, one or more
     further transition metals selected from the group consisting of titanium,
     zirconium, chromium and manganese, which is obtainable by a process
     comprising: (a) preparing a kneadable composition comprising the alloy, a
shaping
     aid, water and a pore former; (b) shaping the kneadable composition
     to form a shaped body; (c) calcining the shaped body; (d) activating the
     calcined shaped body by treatment with an aqueous alkali solution; (e) rinsing
     the shaped catalyst body with aqueous alkali metal hydroxide solution; and (f)
     rinsing the shaped catalyst body with water.

L16  ANSWER 2 OF 3  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Manufacture of shaped, fixed-bed, Raney-type metal catalyst for
     (de)hydrogenation and hydrogenolysis
AN   1998:776617  CAPLUS
DN   130:40073
TI   Manufacture of shaped, fixed-bed, Raney-type metal catalyst for
     (de)hydrogenation and hydrogenolysis
IN   Sauer, Jorg; Haas, Thomas; Keller, Bruno; Freund, Andreas; Burkhardt,
     Werner; Michelchen, Dietrich; Berweiler, Monika
PA   Degussa Aktiengesellschaft, Germany
SO   Eur. Pat. Appl., 9 pp.
     CODEN: EPXXDW
DT   Patent
LA   German
FAN.CNT 2
     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
```

PI	EP 880996	A1	19981202	EP 1998-108422	19980508
	EP 880996	B1	20030625		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
				DE 1997-19721897A	19970526
	DE 19721897	A1	19981203	DE 1997-19721897	19970526
	TW 457128	B	20011001	TW 1998-87107849	19980520
				DE 1997-19721897A	19970526
	JP 10328569	A2	19981215	JP 1998-141287	19980522
				DE 1997-19721897A	19970526
	SG 74630	A1	20010724	SG 1998-1127	19980523
				DE 1997-19721897A	19970526

PATENT FAMILY INFORMATION:

FAN 2004:310810

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004072686	A1	20040415	US 2001-988390	20011119
				DE 1997-19721897A	19970526
				US 1998-81568 A2	19980519
	DE 19721897	A1	19981203	DE 1997-19721897	19970526
	US 6337300	B1	20020108	US 1998-81568	19980519
				DE 1997-19721897A	19970526

AB The title catalyst having a total **pore** volume 0.1-0.6 mL/g consists entirely of a catalyst metal alloy, an extractable metal alloy component and, optionally, a promoter. The catalyst comprises an activated, 0.1-2.0-mm-thick shell obtained by leaching the extractable alloy component. Thus, a catalyst having bulk d. 1.2 kg/L was prepared by extruding a mixture comprising an Co/Al alloy and Ultraform N 2320 binder, decomposing the binder at 120-280°, calcining the residue at 800°, and extracting the Al for 120 min at 80° with 20% aqueous NaOH. The catalyst was used to produce 99.9% pure isophoronediamine from isophoronenitrile in a 2-step process with 89.7% yield.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

TI Use of **Raney** cobalt hydrogenation catalysts in the manufacture of isophoronediamine

AN 1997:140309 CAPLUS

DN 126:145597

TI Use of **Raney** cobalt hydrogenation catalysts in the manufacture of isophoronediamine

IN Haas, Thomas; Burmeister, Roland; Arntz, Dietrich; Weber, Karl-Ludwig; Berweiler, Monika

PA Degussa A.-G., Germany

SO Ger., 6 pp.
CODEN: GWXXAW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19540191	C1	19961121	DE 1995-19540191	19951030
	EP 771784	A1	19970507	EP 1996-115705	19961001
	R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
				DE 1995-19540191A	19951030
	TW 411327	B	20001111	TW 1996-85113048	19961024
				DE 1995-19540191A	19951030
	JP 09169706	A2	19970630	JP 1996-285596	19961028
				DE 1995-19540191A	19951030
	US 5679860	A	19971021	US 1996-739044	19961028
				DE 1995-19540191A	19951030

AB Isophoronediamine (I), useful as a monomer for polyamides, a crosslinking agent for epoxy resins, and an intermediate for manufacture of IPDI, is prepared

from isophorone nitrile (II) with improved yield and space-time yield in two steps by (1) (catalytic) imination with NH3 and (2) hydrogenation in the presence of a C1-3 alc. over a solid bed of **Raney** Co catalyst at 50-150°/3-10 MPa. The hydrogenation catalyst bed is prepared by sintering a mixture of powdered Co and powdered **Raney** Co alloy to give a material with d. 1.3-5.5 g/cm3, **pore** volume ≤0.5 cm3/g, and surface area <1 m2/g, followed by activation with alkali metal hydroxide. Thus, passing 260 mL/h 24:76 II-MeOH and 140 mL/h NH3 at 100°/6 MPa and liquid hourly space velocity 2 through a tubular reactor containing 40 mL TiO2 imination catalyst and 160 mL **Raney** Co hydrogenation catalyst in successive zones gave I in 92.2% yield (based on II), along with 3% 4,6,6-trimethyl-2-azabicyclo[3.2.1]octane and 3.3% 6-imino-3,3,5-trimethyl-7-azabicyclo[3.2.1]octane, which could be recycled. Distillation gave I of 99.8% purity.

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	17.93	94.51

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-2.08	-9.01

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 09:12:17 ON 18 MAY 2004

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:
* * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 09:54:40 ON 18 MAY 2004
FILE 'CAPLUS' ENTERED AT 09:54:40 ON 18 MAY 2004
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FULL ESTIMATED COST	17.93	94.51

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-2.08	-9.01

=>
Connection closed by remote host

---Logging off of STN---

END

Unable to generate the STN prompt.
Exiting the script...